

~~Pearson BTEC Level 3 Nationals Certificate, Extended Certificate,
Foundation Diploma, Diploma, Extended Diploma~~

Window for supervised period:

Monday 13 May 2019 – Friday 17 May 2019

Supervised hours: 10 hours

Paper Reference **31761H**

Information Technology

Unit 2: Creating Systems to Manage Information

Part S

You must have:

1906DATA.txt, activity2tables.rtf, activity3interface.rtf, activity4testing.rtf,
activity5evaluation.rtf

Instructions

- This booklet contains material for the completion of the set task under supervised conditions.
- This booklet is specific to each series and this material must only be issued to learners who have been entered to undertake the task in the relevant series.
- This booklet should be kept securely until the start of the 10-hour supervised assessment period and between sessions.
- This set task should be undertaken during the assessment period of 1 week timetabled by Pearson.

Information

- This booklet should not be returned to Pearson.
- Answer **all** activities.
- The total mark for this paper is 66.

Turn over ►

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Instructions to Teachers/Tutors and/or Invigilators

This paper must be read in conjunction with the unit information in the unit specification and the *BTEC Nationals Instructions for Conducting External Assessments (ICEA)* document. See Pearson website for details.

Refer carefully to the instructions in this task booklet and the *Instructions for Conducting External Assessments (ICEA)* document to ensure that the assessment is supervised correctly.

The set task should be carried out under supervised conditions on a computer.

Electronic templates for Activities 2, 3, 4 and 5 are available on the website for centres to download for learner use.

Internet access is not permitted.

The learners must complete their work independently whilst being supervised by the teacher/tutor.

Centres are free to arrange the supervised assessment period how they wish provided the 10 hours for producing final outcomes are under the level of control specified, and in accordance with the conduct procedures.

Centres are responsible for putting in place appropriate checks to ensure that only permitted material is introduced into the supervised environment.

Maintaining Security

- During any break, materials must be kept securely.
- User areas must only be accessible to the individual learners and to named members of staff.
- Access to the internet is not permitted.
- Learners can only access their work under supervision.
- Learner work must be regularly backed up.
- Learners should save their work to their folder using the naming instructions indicated in each activity.
- Any work learners produce under supervision must be kept securely.
- Any materials being used by learners must be collected in at the end of each session, stored securely and handed back at the beginning of the next session.

Outcomes for Submission

Each learner must create a folder to submit their work. Each folder should be named according to the following naming convention:

[Centre #]_[Registration number #]_[surname]_[first letter of first name]

Example: Joshua Smith with registration number F180542 at centre 12345 would have a folder titled

12345_F180542_Smith_J

Each learner will need to submit 6 PDF documents, within their folder, using the file names listed.

Activity 1: activity1erd_[Registration number #]_[surname]_[first letter of first name]

Activity 2: activity2tables_[Registration number #]_[surname]_[first letter of first name]

Activity 3a: activity3interface_[Registration number #]_[surname]_[first letter of first name]

Activity 3b: activity3report_[Registration number #]_[surname]_[first letter of first name]

Activity 4: activity4testing_[Registration number #]_[surname]_[first letter of first name]

Activity 5: activity5evaluation_[Registration number #]_[surname]_[first letter of first name]

An authentication sheet must be completed by each learner and submitted with the final outcomes.

The work should be submitted no later than 21 May 2019.

Instructions for Learners

Read the set task information carefully.

This contains all the information you need to complete each activity within the set task.

Plan your time carefully to allow for the preparation and completion of all the activities. It is likely that you will be given more than one timetabled session to complete these tasks.

Internet access is not allowed.

You will complete this set task under supervision and your work will be kept securely at all times.

You must work independently throughout the supervised assessment period and must not share your work with other learners.

Your teacher/tutor may clarify the wording that appears in this task but cannot provide any guidance in completion of the task.

Outcomes for Submission

You must create a folder to submit your work. Each folder should be named according to the following naming convention:

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Activity 3b: activity3report_[Registration number #]_[surname]_[first letter of first name]

Activity 4: activity4testing_[Registration number #]_[surname]_[first letter of first name]

Activity 5: activity5evaluation_[Registration number #]_[surname]_[first letter of first name]

You must complete an authentication sheet before you hand your work into your teacher/tutor.

Set Task Brief

You are advised to spend 15 minutes reading the Task Scenario, Task Instructions and the Task Activities you are to complete. You may make notes and/or highlight information to use in the completion of the documents you need to produce for your task.

Task Scenario

You have been asked to create a database for Sharebrook Estate and Safari Park.

The attractions include a private rail track. It has an old steam engine and two carriages that are used for events.

Evening Christmas events have been planned for 20 to 22 December 2019.

The database will record information about:

- events
- customers
- event sales.

There are two types of seat: seats without tables and seats with tables.

There are 56 seats without tables.

There are 40 seats with tables.

There must be at least one adult seat purchased with every sale.

A sale cannot exceed eight tickets.

Children's seats are 10% cheaper than the adult seat price.

Task Instructions

You need to:

- design a relational database structure that:
 - accepts the data provided
 - avoids unnecessary duplication of data
 - uses recognised naming conventions
 - ensures data integrity.
- provide accurate validation rules where appropriate.
- import the data from file 1906DATA.txt into your database structure.
- facilitate database input by producing an:
 - input form to register a new customer
 - input form to purchase seats if they are available. It should show the relevant event, customer and seat sale information. In addition it should show the total cost for adult tickets, the total cost for child tickets and the overall cost.
- show the design view for:
 - a query to display an alphabetically sorted list of customers from Dilmouth showing customer names and telephone numbers
 - a query to update the town name of Lower Marsdon to Lower Marsden
 - a query that would allow a user to enter the parameters event date and seat type. Display the event description, customer names and post codes
 - a query to display the number of seats remaining for each event. It should show the event description, total adult seats sold, total child seats sold and the total number of seats remaining
 - a report that shows customer sales information. It should display the forename and surname, number of adult seats bought and number of child seats bought for each customer. Calculate and display the total number of seats each customer has bought and the sales income this would generate, without any child discount. Calculate and display the overall number of seats sold and sales income without any child discount.
- create a suitable user interface that provides a menu to access the queries and reports listed and the forms required for data entry.
- test your input forms including any calculations, validation and macros/code using appropriate test data (normal, erroneous and extreme).
- evaluate your database against the given scenario justifying:
 - how well your solution meets the requirements of the scenario
 - the quality, performance and usability of the database
 - the changes made during the development and testing process.

Set Task

Task Activities

You must complete ALL activities within the set task.

Produce your documents using a computer.

Save your documents in your folder ready for submission using the formats and naming conventions indicated.

Activity 1: Database relationship screenprint (1 hour 30 minutes)

Create an efficient database structure that minimises data duplication. Ensure you use all and only the fields provided.

Screen print your ERD.

Save your ERD screenprint as a PDF in your folder for submission as **activity1erd_[Registration number #]_[surname]_[first letter of first name]**

You are advised to spend 1 hour and 30 minutes on this activity.

(Total for Activity 1 = 8 marks)

Activity 2: Table structures and validation (1 hour 30 minutes)

Create an efficient table structure based on your ERD screenprint from Activity 1.

Evidence your table structures and validation as screenprints using the given **activity2tables.rtf** template.

Display your screenprints to show:

- the design view of each table showing the structure, including the fields and data types
- validation including suitable:
 - presence checks
 - length checks
 - value lookups
 - table lookups
 - range checks
 - format checks (if appropriate).

Save your evidence of the database structure as a PDF in your folder for submission as **activity2tables_[Registration number #]_[surname]_[first letter of first name]**

You are advised to spend 1 hour and 30 minutes on this activity.

(Total for Activity 2 = 8 marks)

Activity 3: Interface and functionality (3 hours)

(a) Create an efficient interface.

Evidence your interface as screenprints using the given **activity3interface.rtf** template.

Display a screenprint of your object names.

Display other screenprints to show:

Menu

- the **DESIGN** view and **FORM** view of the menu you have created
- details of macros/code you have created and used with the menu

Forms

- the **DESIGN** view and **FORM** view of all the forms you have created
- the **DESIGN** view of any queries you have created and used with the forms, including fields and criteria
- the **DATASHEET** view of any queries you have created and used with the forms
- details of any calculations, validation and macros/code you have created and used with the forms

Queries

- the **DESIGN** view of the four queries specified in the **Task Instructions** that you have created, including fields and criteria
- the **DATASHEET** view of the four queries specified in the **Task Instructions** that you have created

Report

- the **DESIGN** view of the report you have created, including grouping and calculations
- the **DESIGN** view of any queries you have created and used with the report, including fields and criteria
- the **DATASHEET** view of any queries you have created and used with the report.

Ensure sufficient information is provided to allow a competent third party to maintain the database.

Save the evidence of your interface as a PDF in your folder for submission as **activity3interface_[Registration number #]_[surname]_[first letter of first name]**

(b) Save your database report (not a screenprint) as a PDF in your folder for submission as **activity3report_[Registration number #]_[surname]_[first letter of first name]**

You are advised to spend 3 hours on this activity.

(Total for Activity 3 = 26 marks)

Activity 4: Testing (2 hours 45 minutes)

Complete a test log to show how you have tested your input forms using the given **activity4testing.rtf** template.

Save your test log as a PDF in your folder for submission as
activity4testing_[Registration number #]_[surname]_[first letter of first name]

You are advised to spend 2 hours and 45 minutes on this activity.

(Total for Activity 4 = 12 marks)

Activity 5: Evaluation of your database solution (1 hour)

Evaluate your solution using the given **activity5evaluation.rtf** template.

When completing the template you should consider:

- how well your solution meets the requirements of the scenario
- the quality, performance and usability of the database
- the changes made during the development and testing process.

Save your evaluation as a PDF in your folder for submission as
activity5evaluation_[Registration number #]_[surname]_[first letter of first name]

You are advised to spend 1 hour on this activity.

(Total for Activity 5 = 12 marks)

TOTAL FOR TASK = 66 MARKS